

## Patent Application US/07/807,043

## (1) GENERAL INFORMATION:

- (i) APPLICANTS: Boon, Thierry, Van den Eynde, Beno t
- (ii) TITLE OF INVENTION: Tumor Rejection Antigen Precursors, Tumor Rejection Antigens and Uses Thereof
- (iii) NUMBER OF SEQUENCES: 16
- (iv) CORRESPONDENCE ADDRESS:
- (A) ADDRESSEE: Felfe & Lynch
- (B) STREET: 805 Third Avenue
- (C) CITY: New York City
- (D) STATE: New York
- (F) ZIP: 10022
- (v) COMPUTER READABLE FORM:
- (A) MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
- (B) COMPUTER: IBM
- (C) OPERATING SYSTEM: PC-DOS
- (D) SOFTWARE: Wordperfect
- (vi) CURRENT APPLICATION DATA:
- (A) APPLICATION NUMBER: 07/807,043
- (B) FILING DATE: 12-DECEMBER-1991
- (C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
- (A) APPLICATION NUMBER: 07/764,364
- (B) FILING DATE: 23-SEPTEMBER-1991
- (vii) PRIOR APPLICATION DATA:
- (A) APPLICATION NUMBER: 07/728,838
- (b) FILING DATE: 9-JULY-1991
- (vii) PRIOR APPLICATION DATA:
- (A) APPLICATION NUMBER: 07/705,702
- (B) FILING DATE: 23-May-1991
- (viii) ATTORNEY/AGENT INFORMATION:
- (A) NAME: Hanson, Norman D.
- (B) REGISTRATION NUMBER: 30,946
- (C) REFERENCE/DOCKET NUMBER: LUD 253.3
- (ix) TELECOMMUNICATION INFORMATION:
- (A) TELEPHONE: (212) 688-9200
- (B) TELEFAX: (212) 838-3884

## (2) INFORMATION FOR SEQUENCE ID NO: 1:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 462 base pairs
- (B) TYPE: nucleic acid

(c) Strandedness: \_\_\_\_\_

See p. 188

Please insert this field.  
It is mandatory for  
each nucleic sequence.  
(Insert for all 16 sequences)

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54 (D) TOPOLOGY: linear  
55 (ii) MOLECULE TYPE: genomic DNA  
56 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
57  
58  
59  
60  
61 ACCACAGGAG AATGAAAAGA ACCCGGGACT CCCAAAGACG CTAGATGTGT GAAGATCCTG 60  
62 ATCACTCATT GGGTGTCTGA GTTCTGCGAT ATTCATCCCT CAGCCAATGA GCTTACTGTT 120  
63 CTCGTGGGGG GTTTGTGAGC CTTGGGTAGG AAGTTTTGCA AGTCCGCCT ACAGCTCTAG 180  
64 CTTGTGAATT TGTACCCTTT CACGTAAAAA AGTAGTCCAG AGTTTACTAC ACCCTCCCTC 240  
65 CCCCCCTCCA CCTCGTGCTG TGCTGAGTTT AGAAGTCTTC CTTATAGAAG TCTTCCGTAT 300  
66 AGAACTCTTC CGGAGGAAGG AGGGAGGACC CCCCCCTTT GCTCTCCAG CATGCATTGT 360  
67 GTCAACGCCA TTGCACTGAG CTGGTCGAAG AAGTAAGCCG CTAGCTTGCG ACTCTACTCT 420  
68 TATCTTAACT TAGCTCGGCT TCCTGCTGGT ACCCTTTGTG CC 462  
69  
70  
71 (2) INFORMATION FOR SEQUENCE ID NO: 2:  
72 (i) SEQUENCE CHARACTERISTICS:  
73 (A) LENGTH: 675 base pairs  
74 (B) TYPE: nucleic acid  
75 (D) TOPOLOGY: linear  
76 (ii) MOLECULE TYPE: genomic DNA  
77 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
78  
79  
80 ATG TCT GAT AAC AAG AAA CCA GAC AAA GCC CAC AGT GGC TCA GGT GGT 48  
81 Met Ser Asp Asn Lys Lys Pro Asp Lys Ala His Ser Gly Ser Gly Gly  
82 5 10 15  
83  
84 GAC GGT GAT GGG AAT AGG TGC AAT TTA TTG CAC CGG TAC TCC CTG GAA 96  
85 Asp Gly Asp Gly Asn Arg Cys Asn Leu Leu His Arg Tyr Ser Leu Glu  
86 20 25 30  
87  
88 GAA ATT CTG CCT TAT CTA GGG TGG CTG GTC TTC GCT GTT GTC ACA ACA 144  
89 Glu Ile Leu Pro Tyr Leu Gly Trp Leu Val Phe Ala Val Val Thr Thr  
90 35 40 45  
91  
92 AGT TTT CTG GCG CTC CAG ATG TTC ATA GAC GCC CTT TAT GAG GAG CAG 192  
93 Ser Phe Leu Ala Leu Gln Met Phe Ile Asp Ala Leu Tyr Glu Glu Gln  
94 50 55 60  
95  
96 TAT GAA AGG GAT GTG GCC TGG ATA GCC AGG CAA AGC AAG CGC ATG TCC 240  
97 Tyr Glu Arg Asp Val Ala Trp Ile Ala Arg Gln Ser Lys Arg Met Ser  
98 65 70 75 80  
99  
100 TCT GTC GAT GAG GAT GAA GAC GAT GAG GAT GAT GAG GAT GAC TAC TAC 288  
101 Ser Val Asp Glu Asp Glu Asp Asp Glu Asp Asp Glu Asp Asp Tyr Tyr  
102 85 90 95  
103  
104 GAC GAC GAG GAC GAC GAC GAC GAT GCC TTC TAT GAT GAT GAG GAT GAT 336  
105 Asp Asp Glu Asp Asp Asp Asp Ala Phe Tyr Asp Asp Glu Asp Asp  
106 100 105 110

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107  
108 GAG GAA GAA GAA TTG GAG AAC CTG ATG GAT GAT GAA TCA GAA GAT GAG 384  
109 Glu Glu Glu Glu Leu Glu Asn Leu Met Asp Asp Glu Ser Glu Asp Glu  
110 115 120 125  
111  
112 GCC GAA GAA GAG ATG AGC GTG GAA ATG GGT GCC GGA GCT GAG GAA ATG 432  
113 Ala Glu Glu Glu Met Ser Val Glu Met Gly Ala Gly Ala Glu Glu Met  
114 130 135 140  
115  
116 GGT GCT GGC GCT AAC TGT GCC TGT GTT CCT GGC CAT CAT TTA AGG AAG 480  
117 Gly Ala Gly Ala Asn Cys Ala Cys Val Pro Gly His His Leu Arg Lys  
118 145 150 155 160  
119  
120 AAT GAA GTG AAG TGT AGG ATG ATT TAT TTC TTC CAC GAC CCT AAT TTC 528  
121 Asn Glu Val Lys Cys Arg Met Ile Tyr Phe Phe His Asp Pro Asn Phe  
122 165 170 175  
123  
124 CTG GTG TCT ATA CCA GTG AAC CCT AAG GAA CAA ATG GAG TGT AGG TGT 576  
125 Leu Val Ser Ile Pro Val Asn Pro Lys Glu Gln Met Glu Cys Arg Cys  
126 180 185 190  
127  
128 GAA AAT GCT GAT GAA GAG GTT GCA ATG GAA GAG GAA GAA GAA GAA GAG 624  
129 Glu Asn Ala Asp Glu Glu Val Ala Met Glu Glu Glu Glu Glu Glu Glu  
130 195 200 205  
131  
132 GAG GAG GAG GAG GAA GAG GAA ATG GGA AAC CCG GAT GGC TTC TCA CCT 672  
133 Glu Glu Glu Glu Glu Glu Glu Met Gly Asn Pro Asp Gly Phe Ser Pro  
134 210 215 220 225  
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136 TAG 675  
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138 (2) INFORMATION FOR SEQUENCE ID NO: 3:  
139 (i) SEQUENCE CHARACTERISTICS:  
140 (A) LENGTH: 228 base pairs  
141 (B) TYPE: nucleic acid  
142 (D) TOPOLOGY: linear  
143 (ii) MOLECULE TYPE: genomic DNA  
144 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:  
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146  
147  
148  
149 GCATGCAGTT GCAAAGCCCA GAAGAAAGAA ATGGACAGCG GAAGAAGTGG TTGTTTTTTT 60  
150 TTCCCCTTCA TTAATTTTCT AGTTTTTAGT AATCCAGAAA ATTTGATTTT GTTCTAAAGT 120  
151 TCATTATGCA AAGATGTCAC CAACAGACTT CTGACTGCAT GGTGAACTTT CATATGATAC 180  
152 ATAGGATTAC ACTTGTACCT GTTAAAAATA AAAGTTTGAC TTGCATAC 228  
153  
154  
155

156 (2) INFORMATION FOR SEQUENCE ID NO: 4:  
157 (i) SEQUENCE CHARACTERISTICS:  
158 (A) LENGTH: 1365 base pairs  
159 (B) TYPE: nucleic acid

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160 (D) TOPOLOGY: linear  
161 (ii) MOLECULE TYPE: genomic DNA  
162 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:  
163  
164  
165  
166  
167 ACCACAGGAG AATGAAAAGA ACCCGGGACT CCCAAAGACG CTAGATGTGT 50  
168 GAAGATCCTG ATCACTCATT GGGTGTCTGA GTTCTGCGAT ATTCATCCCT 100  
169 CAGCCAATGA GCTTACTGTT CTCGTGGGGG GTTTGTGAGC CTTGGGTAGG 150  
170 AAGTTTTGCA AGTTCGCCT ACAGCTCTAG CTTGTGAATT TGTACCCTTT 200  
171 CACGTAAAAA AGTAGTCCAG AGTTTACTAC ACCCTCCCTC CCCCCTCCCA 250  
172 CCTCGTGCTG TGCTGAGTTT AGAAGTCTTC CTTATAGAAG TCTTCCGTAT 300  
173 AGAACTCTTC CGGAGGAAGG AGGGAGGACC CCCCCCTTT GCTCTCCCAG 350  
174 CATGCATTGT GTCAACGCCA TTGCACTGAG CTGGTCGAAG AAGTAAGCCG 400  
175 CTAGCTTGCG ACTCTACTCT TATCTTAACT TAGCTCGGCT TCCTGCTGGT 450  
176 ACCCTTTGTG CC 462  
177 ATG TCT GAT AAC AAG AAA CCA GAC AAA GCC CAC AGT GGC TCA 504  
178 GGT GGT GAC GGT GAT GGG AAT AGG TGC AAT TTA TTG CAC CGG 546  
179 TAC TCC CTG GAA GAA ATT CTG CCT TAT CTA GGG TGG CTG GTC 588  
180 TTC GCT GTT GTC ACA ACA AGT TTT CTG GCG CTC CAG ATG TTC 630  
181 ATA GAC GCC CTT TAT GAG GAG CAG TAT GAA AGG GAT GTG GCC 672  
182 TGG ATA GCC AGG CAA AGC AAG CGC ATG TCC TCT GTC GAT GAG 714  
183 GAT GAA GAC GAT GAG GAT GAT GAG GAT GAC TAC TAC GAC GAC 756  
184 GAG GAC GAC GAC GAC GAT GCC TTC TAT GAT GAT GAG GAT GAT 798  
185 GAG GAA GAA GAA TTG GAG AAC CTG ATG GAT GAT GAA TCA GAA 840  
186 GAT GAG GCC GAA GAA GAG ATG AGC GTG GAA ATG GGT GCC GGA 882  
187 GCT GAG GAA ATG GGT GCT GGC GCT AAC TGT GCC TGT GTT CCT 924  
188 GGC CAT CAT TTA AGG AAG AAT GAA GTG AAG TGT AGG ATG ATT 966  
189 TAT TTC TTC CAC GAC CCT AAT TTC CTG GTG TCT ATA CCA GTG 1008  
190 AAC CCT AAG GAA CAA ATG GAG TGT AGG TGT GAA AAT GCT GAT 1050  
191 GAA GAG GTT GCA ATG GAA GAG GAA GAA GAA GAG GAG GAG 1092  
192 GAG GAG GAA GAG GAA ATG GGA AAC CCG GAT GGC TTC TCA CCT 1134  
193 TAG 1137  
194 GCATGCAGTT GCAAAGCCCA GAAGAAAGAA ATGGACAGCG GAAGAAGTGG 1187  
195 TTGTTTTTTT TTCCCTTCA TTAATTTTCT AGTTTTTAGT AATCCAGAAA 1237  
196 ATTTGATTTT GTTCTAAAGT TCATTATGCA AAGATGTCAC CAACAGACTT 1287  
197 CTGACTGCAT GGTGAACCTT CATATGATAC ATAGGATTAC ACTTGTACCT 1337  
198 GTTAAAAATA AAAGTTTGAC TTGCATAC 1365  
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200  
201  
202 (2) INFORMATION FOR SEQUENCE ID NO: 5:  
203 (i) SEQUENCE CHARACTERISTICS:  
204 (A) LENGTH: 4698 base pairs  
205 (B) TYPE: nucleic acid  
206 (D) TOPOLOGY: linear  
207 (ii) MOLECULE TYPE: genomic DNA  
208 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:  
209  
210  
211  
212 ACCACAGGAG AATGAAAAGA ACCCGGGACT CCCAAAGACG CTAGATGTGT 50

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213	GAAGATCCTG	ATCACTCATT	GGGTGTCTGA	GTTCTGCGAT	ATTCATCCCT	100
214	CAGCCAATGA	GCTTACTGTT	CTCGTGGGGG	TTTTGTGAGC	CTTGGGTAGG	150
215	AAGTTTTGCA	AGTTCCGCCT	ACAGCTCTAG	CTTGTGAATT	TGTACCCTTT	200
216	CACGTAAAAA	AGTAGTCCAG	AGTTTACTAC	ACCCTCCCTC	CCCCCTCCCA	250
217	CCTCGTGCTG	TGCTGAGTTT	AGAAGTCTTC	CTTATAGAAG	TCTTCCGTAT	300
218	AGAACTCTTC	CGGAGGAAGG	AGGGAGGACC	CCCCCCTTT	GCTCTCCAG	350
219	CATGCATTGT	GTCAACGCCA	TTGCACTGAG	CTGGTCGAAG	AAGTAAGCCG	400
220	CTAGCTTGCG	ACTCTACTCT	TATCTTAACT	TAGCTCGGCT	TCCTGCTGGT	450
221	ACCCTTTGTG	CC				462
222	ATG TCT GAT	AAC AAG AAA	CCA GAC AAA	GCC CAC AGT	GGC TCA	504
223	GGT GGT GAC	GGT GAT GGG	AAT AGG TGC	AAT TTA TTG	CAC CGG	546
224	TAC TCC CTG	GAA GAA ATT	CTG CCT TAT	CTA GGG TGG	CTG GTC	588
225	TTC GCT GTT	GTC ACA ACA	AGT TTT CTG	GCG CTC CAG	ATG TTC	630
226	ATA GAC GCC	CTT TAT GAG	GAG CAG TAT	GAA AGG GAT	GTG GCC	672
227	TGG ATA GCC	AGG CAA AGC	AAG CGC ATG	TCC TCT GTC	GAT GAG	714
228	GAT GAA GAC	GAT GAG GAT	GAT GAG GAT	GAC TAC TAC	GAC GAC	756
229	GAG GAC GAC	GAC GAC GAT	GCC TTC TAT	GAT GAT GAG	GAT GAT	798
230	GAG GAA GAA	GAA TTG GAG	AAC CTG ATG	GAT GAT GAA	TCA GAA	840
231	GAT GAG GCC	GAA GAA GAG	ATG AGC GTG	GAA ATG GGT	GCC GGA	882
232	GCT GAG GAA	ATG GGT GCT	GGC GCT AAC	TGT GCC T		916
233	GTGAGTAACC	CGTGGTCTTT	ACTCTAGATT	CAGGTGGGGT	GCATTCTTTA	966
234	CTCTTGCCCA	CATCTGTAGT	AAAGACCACA	TTTTGGTTGG	GGGTCATTGC	1016
235	TGGAGCCATT	CCTGGCTCTC	CTGTCCACGC	CTATCCCCGC	TCCTCCCATC	1066
236	CCCCACTCCT	TGCTCCGCTC	TCTTTCCTTT	TCCCACCTTG	CCTCTGGAGC	1116
237	TTCAGTCCAT	CCTGCTCTGC	TCCCTTTCCC	CTTTGCTCTC	CTTGCTCCCC	1166
238	TCCCCCTCGG	CTCAACTTTT	CGTGCCTTCT	GCTCTCTGAT	CCCCACCCTC	1216
239	TTCAGGCTTC	CCCATTTGCT	CCTCTCCCGA	AACCCTCCCC	TTCTGTTC	1266
240	CCTTTTTCGG	CCTTTTCTTT	CCTGCTCCCC	TCCCCCTCCC	TATTTACCTT	1316
241	TCACCAGCTT	TGCTCTCCCT	GCTCCCCCTC	CCCTTTTGCA	CCTTTTCTTT	1366
242	TCCTGCTCCC	CTCCCCCTCC	CCTCCCTGTT	TACCCTTCAC	CGCTTTTCCT	1416
243	CTACCTGCTT	CCCTCCCCCT	TGCTGCTCCC	TCCCTATTG	CATTTTCGGG	1466
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245	CTCCCTCCC	CCTCCCCAGG	CCTTTTTTTT	TTTTTTTTTT	TTTTTTTTTT	1566
246	TTGGTTTTTC	GAGACAGGCT	TTCTCTTTGT	ATCCCTGGCT	GTCCCTGGCAG	1616
247	TCACTCTGTA	GACCAGGCTG	GCCTCAAAC	CAGAAATCTG	CCTGCCTCTG	1666
248	CCTCCCAAAT	GCTGGGATTA	AAGGCTTGCA	CCAGGACTGC	CCCAGTGCAG	1716
249	GCCTTTCTTT	TTTCTCCTCT	CTGGTCTCCC	TAATCCCTTT	TCTGCATGTT	1766
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251	TTCCCTTCCG	GCACCTTCC	TAGCCCTGCT	CTGTTCCCTC	TCCCTGCTCC	1866
252	CCTCCCCCTC	TTTGCTCGAC	TTTTAGCAGC	CTTACCTCTC	CCTGCTTTCT	1916
253	GCCCCGTTCC	CCTTTTTTGT	GCCTTTCCTC	CTGGCTCCCC	TCCACCTTCC	1966
254	AGCTCACCTT	TTTGTTTGTT	TGGTTGTTTG	GTTGTTTGGT	TTGCTTTTTT	2016
255	TTTTTTTTTT	GCACCTTGTT	TTCCAAGATC	CCCCCTCCCC	TCCGGCTTCC	2066
256	CCTCTGTGTG	CCTTTCCTGT	TCCCTCCCCC	TCGCTGGCTC	CCCCCTCCCT	2116
257	TCTGCCTTTC	CTGTCCCTGC	TCCCTTCTCT	GCTAACCTTT	TAATGCCTTT	2166
258	CTTTTCTAGA	CTCCCCCTC	CAGGCTTGCT	GTTTGCTTCT	GTGCACTTTT	2216
259	CCTGACCTCG	CTCCCCCTCC	CCTCCAGCT	CCCCCTCTT	TTCCCACCTC	2266
260	CCTTTCTCCA	GCTGTACACC	CCTCCTTCTC	TCCTCTCTGT	TTCTCCCACT	2316
261	TCCTGCTTCC	TTTACCCCTT	CCCTCTCCCT	ACTCTCCTCC	CTGCCTGCTG	2366
262	GACTTCTCT	CCAGCCGCCC	AGTTCCCTGC	AGTCCTGGAG	TCTTTCCTGC	2416
263	CTCTCTGTCC	ATCACTTCCC	CCTAGTTTCA	CTTCCCTTTC	ACTCTCCCCT	2466
264	ATGTGTCTCT	CTTCTATCT	ATCCCTTCC	TTCTGTCCCC	TCTCCTCTGT	2516
265	CCATCACCTC	TCTCCTCCCT	TCCCTTTCCT	CTCTCTTCCA	TTTTCTTCCA	2566

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266 CCTGCTTCTT TACCCTGCCT CTCCCATTCG CCTCTTACCT TTATGCCCAT 2616
267 TCCATGTCCC CTCTCAATTC CCTGTCCCAT TGTGCTCCCT CACATCTTCC 2666
268 ATTTCCCTCT TTCTCCCTTA GCCTCTTCTT CCTCTTCTCT TGTATCTCCC 2716
269 TTCCCTTTGC TTCTCCCTCC TCCTTTCCCC TTCCCTTATG CCTCTACTC 2766
270 TACTTGATCT TCTCTCCTCT CCACATACCC TTTTTCCTTT CCACCCTGCC 2816
271 CTTTGTCCCC AGACCCTACA GTATCCTGTG CACAGGAAGT GGGAGGTGCC 2866
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273 AAGGCTGGAT GAAAATAAGG CCAGGTTCTG AGGACAGCTG GAATCTAGCC 2966
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275 CTTGATCCTT GCTGCTTCTT TTACATATGT TGGCACATCT TTCTCAAATG 3066
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277 GAATCTGAAA ACTAGGGGCC AGTGGTTTGT TTTGGGGACA AATTAGCACG 3166
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279 TCCTTCTACA GGTGAGAAAGT GGAAAAATTG TCACTATGAA GTTCTTTTAA 3266
280 GGCTAAAGAT ACTTGGAAAC ATAGAAGCGT TGTTAAAATA CTGCTTTCTT 3316
281 TTGCTAAAT ATTCTTCTC ACATATTCAT ATTCTCCAG 3355
282 GT GTT CCT GGC CAT CAT TTA AGG AAG AAT GAA GTG AAG TGT 3396
283 AGG ATG ATT TAT TTC CAC GAC CCT AAT TTC CTG GTG TCT 3438
284 ATA CCA GTG AAC CCT AAG GAA CAA ATG GAG TGT AGG TGT GAA 3480
285 AAT GCT GAT GAA GAG GTT GCA ATG GAA GAG GAA GAA GAA GAA 3522
286 GAG GAG GAG GAG GAG GAA GAG GAA ATG GGA AAC CCG GAT GGC 3564
287 TTC TCA CCT TAG 3576
288 GCATGCAGGT ACTGGCTTCA CTAACCAACC ATTCCTAACA TATGCCTGTA 3626
289 GCTAAGAGCA TCTTTTAAA AAATATTATT GGTAAGTAA ACAATTGTTA 3676
290 TCTTTTACA TTAATAAGTA TTAAATTAAT CCAGTATACA GTTTTAAGAA 3726
291 CCCTAAGTTA AACAGAAGTC AATGATGTCT AGATGCCTGT TCTTTAGATT 3776
292 GTAGTGAGAC TACTTACTAC AGATGAGAAG TTGTTAGACT CGGGAGTAGA 3826
293 GACCAGTAAA AGATCATGCA GTGAAATGTG GCCATGGAAA TCGCATATTG 3876
294 TTCTTATAGT ACCTTTGAGA CAGCTGATAA CAGCTGACAA AAATAAGTGT 3926
295 TTCAAGAAAG ATCACACGCC ATGGTTCACA TGCAAATTAT TATTTGTCTG 3976
296 TTCTGATTTT TTTCAATTCT AGACCTGTGG TTTTAAAGAG ATGAAAATCT 4026
297 CTTAAAATTT CCTTCACTCT TAATTTTCCT TAACTTTAGT TTTTTCCTACT 4076
298 TAGAATTCAA TTCAAATCTT TAATTCATC TTAATTTTAA GATTTCTTAA 4126
299 AATGTTTTTT AAAAAAATG CAAATCTCAT TTTTAAGAGA TGAAAGCAGA 4176
300 GTAAGTGGGG GGCTTAGGGA ATCTGTAGGG TTGCGGTATA GCAATAGGGA 4226
301 GTTCTGGTCT CTGAGAAGCA GTCAGAGAGA ATGGAAAACC AGGCCCTTGC 4276
302 CAGTAGGTTA GTGAGGTTGA TATGATCAGA TTATGGACAC TCTCCAAATC 4326
303 ATAAATACTC TAACAGCTAA GGATCTCTGA GGGAAACACA ACAGGGAAAT 4376
304 ATTTTAGTTT CTCCTTGAGA AACAATGACA AGACATAAAA TTGGCAAGAA 4426
305 AGTCAGGAGT GTATTCTAAT AAGTGTGCT TATCTCTTAT TTTCTTCTAC 4476
306 AGTTGCAAG CCCAGAAGAA AGAAATGGAC AGCGGAAGAA GTGGTTGTTT 4526
307 TTTTTCCTCC TTCATTAATT TTCTAGTTT TAGTAATCCA GAAAATTTGA 4576
308 TTTTGTCTTA AAGTTCATTA TGCAAAGATG TCACCAACAG ACTTCTGACT 4626
309 GCATGGTGAA CTTTCATATG ATACATAGGA TTACACTTGT ACCTGTTAAA 4676
310 AATAAAGTT TGAATTGCAT AC 4698
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311  
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313 (2) INFORMATION FOR SEQUENCE ID NO: 6:

314 (i) SEQUENCE CHARACTERISTICS:

315 (A) LENGTH: 7 amino acids

316 (B) TYPE: amino acid

317 (D) TOPOLOGY: linear

318 (ii) MOLECULE TYPE: protein

## Patent Application US/07/807,043

319 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

320  
321  
322  
323  
324 Leu Pro Tyr Leu Gly Trp Leu  
325 5  
326  
327  
328  
329  
330  
331  
332

333 (2) INFORMATION FOR SEQUENCE ID NO: 7:

334 (i) SEQUENCE CHARACTERISTICS:

335 (A) LENGTH: 2418 base pairs

336 (B) TYPE: nucleic acid

337 (D) TOPOLOGY: linear

338 (ii) MOLECULE TYPE: genomic DNA

339 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

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341  
342  
343

344	GGATCCAGGC	CCTGCCAGGA	AAAATATAAG	GGCCCTGCGT	GAGAACAGAG	50
345	GGGGTCATCC	ACTGCATGAG	AGTGGGGATG	TCACAGAGTC	CAGCCCACCC	100
346	TCCTGGTAGC	ACTGAGAAGC	CAGGGCTGTG	CTTGCGGTCT	GCACCCTGAG	150
347	GGCCCGTGGA	TTCTCTTCC	TGGAGCTCCA	GGAACCAGGC	AGTGAGGCCT	200
348	TGGTCTGAGA	CAGTATCCTC	AGGTCACAGA	GCAGAGGATG	CACAGGGTGT	250
349	GCCAGCAGTG	AATGTTTGCC	CTGAATGCAC	ACCAAGGGCC	CCACCTGCCA	300
350	CAGGACACAT	AGGACTCCAC	AGAGTCTGGC	CTCACCTCCC	TACTGTCACT	350
351	CCTGTAGAAT	CGACCTCTGC	TGGCCGGCTG	TACCCTGAGT	ACCCTCTCAC	400
352	TTCTCTCTTC	AGGTTTTTCAG	GGGACAGGCC	AACCCAGAGG	ACAGGATTCC	450
353	CTGGAGGCCA	CAGAGGAGCA	CCAAGGAGAA	GATCTGTAAG	TAGGCCTTTG	500
354	TTAGAGTCTC	CAAGGTTTCAG	TTCTCAGCTG	AGGCCTCTCA	CACACTCCCT	550
355	CTCTCCCCAG	GCCTGTGGGT	CTTCATTGCC	CAGCTCCTGC	CCACACTCCT	600
356	GCCTGCTGCC	CTGACGAGAG	TCATCATGTC	TCTTGAGCAG	AGGAGTCTGC	650
357	ACTGCAAGCC	TGAGGAAGCC	CTTGAGGCCC	AACAAGAGGC	CCTGGGCCTG	700
358	GTGTGTGTGC	AGGCTGCCAC	CTCCTCCTCC	TCTCCTCTGG	TCCTGGGCAC	750
359	CCTGGAGGAG	GTGCCCCACTG	CTGGGTCAAC	AGATCCTCCC	CAGAGTCCTC	800
360	AGGGAGCCTC	CGCCTTTCCC	ACTACCATCA	ACTTCACTCG	ACAGAGGCAA	850
361	CCCAGTGAGG	GTTCCAGCAG	CCGTGAAGAG	GAGGGGCCAA	GCACCTCTTG	900
362	TATCCTGGAG	TCCTTGTTCC	GAGCAGTAAT	CACTAAGAAG	GTGGCTGATT	950
363	TGGTTGGTTT	TCTGCTCCTC	AAATATCGAG	CCAGGGAGCC	AGTCACAAAG	1000
364	GCAGAAATGC	TGGAGAGTGT	CATCAAAAAA	TACAAGCACT	GTTTTCTCTG	1050
365	GATCTTCGGC	AAAGCCTCTG	AGTCCTTGCA	GCTGGTCTTT	GGCATTGACG	1100
366	TGAAGGAAGC	AGACCCCCACC	GGCCACTCCT	ATGTCCTTGT	CACCTGCCTA	1150
367	GGTCTCTCCT	ATGATGGCCT	GCTGGGTGAT	AATCAGATCA	TGCCCCAAGAC	1200
368	AGGCTTCCTG	ATAATTGTC	TGGTCATGAT	TGCAATGGAG	GGCGGCCATG	1250
369	CTCCTGAGGA	GGAAATCTGG	GAGGAGCTGA	GTGTGATGGA	GGTGTATGAT	1300
370	GGGAGGGAGC	ACAGTGCCTA	TGGGGAGCCC	AGGAAGCTGC	TCACCCAAGA	1350
371	TTTGGTGCAG	GAAAAGTACC	TGGAGTACGG	CAGGTGCCGG	ACAGTGATCC	1400

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372 CGCACGCTAT GAGTTCCTGT GGGGTCCAAG GGCCCTCGCT GAAACCAGCT 1450  
373 ATGTGAAAGT CCTTGAGTAT GTGATCAAGG TCAGTGCAAG AGTTCGCTTT 1500  
374 TTCTTCCCAT CCCTGCGTGA AGCAGCTTTG AGAGAGGAGG AAGAGGGAGT 1550  
375 CTGAGCATGA GTTGCAGCCA AGGCCAGTGG GAGGGGGACT GGGCCAGTGC 1600  
376 ACCTTCCAGG GCCGCGTCCA GCAGCTTCCC CTGCCCTCGT TGACATGAGG 1650  
377 CCCATTCTTC ACTCTGAAGA GAGCGGTCAG TGTTCCTCAGT AGTAGGTTTC 1700  
378 TGTTCTATTG GGTGACTTGG AGATTTATCT TTGTTCTCTT TTGGAATTGT 1750  
379 TCAAATGTTT TTTTAAAGG GATGGTTGAA TGAAGTTCAG CATCCAAGTT 1800  
380 TATGAATGAC AGCAGTCACA CAGTTCGTGT TATATAGTTT AAGGGTAAGA 1850  
381 GTCTTGTTT TTATTCAGAT TGGGAAATCC ATTCTATTTT GTGAATTGGG 1900  
382 ATAATAACAG CAGTGAATA AGTACTTAGA AATGTGAAAA ATGAGCAGTA 1950  
383 AAATAGATGA GATAAAGAAC TAAAGAAATT AAGAGATAGT CAATTCCTGC 2000  
384 CTTATACCTC AGTCTATTCT GTAAAATTTT TAAAGATATA TGCATACCTG 2050  
385 GATTTCCCTG GCTTCTTTGA GAATGTAAGA GAAATTAAAT CTGAATAAAG 2100  
386 AATTCTTCCT GTTCACTGGC TCTTTTCTTC TCCATGCACT GAGCATCTGC 2150  
387 TTTTGGGAAG GCCCTGGGTT AGTAGTGGAG ATGCTAAGGT AAGCCAGACT 2200  
388 CATACCCACC CATAGGGTCG TAGAGTCTAG GAGCTGCAGT CACGTAATCG 2250  
389 AGGTGGCAAC ATGCTCTCTA AAGATGTAGG GAAAAGTGAG AGAGGGGTGA 2300  
390 GGGTGTGGGG CTCCGGGTGA GAGTGGTGA GTGTCAATGC CCTGAGCTGG 2350  
391 GGCATTTTGG GCTTTGGGAA ACTGCAGTTC CTTCTGGGGG AGCTGATTGT 2400  
392 AATGATCTTG SGTGATCC (2418) 2419 are listed

393  
394 (2) INFORMATION FOR SEQUENCE ID NO: 8:  
395 (i) SEQUENCE CHARACTERISTICS:  
396 (A) LENGTH: 5724 base pairs  
397 (B) TYPE: nucleic acid  
398 (D) TOPOLOGY: linear  
399 (ii) MOLECULE TYPE: genomic DNA  
400 (ix) FEATURE:  
401 (A) NAME/KEY: MAGE-1 gene  
402 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:  
403  
404  
405

The computer detected a discrepancy. Please recount the base pairs.

406 CCCGGGGCAC CACTGGCATC CCTCCCCCTA CCACCCCAAC TCCCTCCCTT 50  
407 TACGCCACCC ATCCAAACAT CTTACGCTC ACCCCAGCC CAAGCCAGGC 100  
408 AGAATCCGGT TCCACCCCTG CTCTCAACCC AGGGAAGCCC AGGTGCCAG 150  
409 ATGTGACGCC ACTGACTTGA GCATTAGTGG TTAGAGAGAA GCGAGGTTTT 200  
410 CGGTCTGAGG GCGGCTTGA GATCGGTGGA GGGAAGCGGG CCCAGCTCTG 250  
411 TAAGGAGGCA AGGTGACATG CTGAGGGAGG ACTGAGGACC CACTTACCCC 300  
412 AGATAGAGGA CCCCATAA TCCCTTCATG CCAGTCTTGG ACCATCTGGT 350  
413 GGTGGACTTC TCAGGCTGGG CCACCCCCAG CCCCCTTGCT GCTTAAACCA 400  
414 CTGGGGACTC GAAGTCAGAG CTCCGTGTGA TCAGGGAAGG GCTGCTTAGG 450  
415 AGAGGGCAGC GTCCAGGCTC TGCCAGACAT CATGCTCAGG ATTCTCAAGG 500  
416 AGGGCTGAGG GTCCCTAAGA CCCCCTCCC GTGACCCAAC CCCCCTCCA 550  
417 ATGCTCACTC CCGTGACCCA ACCCCCTCTT CATTGTCAAT CCAACCCCA 600  
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421 GCCACTGACT TGCGCATTGT GGGGCAGAGA GAAGCGAGGT TTCCATTCTG 800  
422 AGGGACGGCG TAGAGTTCGG CCGAAGGAAC CTGACCCAGG CTCTGTGAGG 850  
423 AGGCAAGGTG AGAGGCTGAG GGAGGACTGA GGACCCCGCC ACTCCAATA 900  
424 GAGAGCCCCA AATATTCCAG CCCCGCCCTT GCTGCCAGCC CTGGCCACC 950



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425	CGCGGGAAGA	CGTCTCAGCC	TGGGCTGCCC	CCAGACCCCT	GCTCCAAAAG	1000
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427	TGTGACCAGG	GCAGGACTGG	TTAGGAGAGG	GCAGGGCACA	GGCTCTGCCA	1100
428	GGCATCAAGA	TCAGCACCCA	AGAGGGAGGG	CTGTGGGCCC	CCAAGACTGC	1150
429	ACTCCAATCC	CCACTCCCAC	CCCATTCGCA	TTCCCATTCC	CCACCCAACC	1200
430	CCCATCTCCT	CAGCTACACC	TCCACCCCCA	TCCCTACTCC	TACTCCGTCA	1250
431	CCTGACCACC	ACCCCTCCAGC	CCCAGCACCA	GCCCCAACCC	TTCTGCCACC	1300
432	TCACCCTCAC	TGCCCCAAC	CCCACCCTCA	TCTCTCTCAT	GTGCCCCACT	1350
433	CCCATCGCCT	CCCCCATTTCT	GGCAGAATCC	GGTTTGCCCC	TGCTCTCAAC	1400
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436	ATCCACTGAG	GGGAGTGTTT	TTAGGCTCTG	TGAGGAGGCA	AGGTGAGATG	1550
437	CTGAGGGAGG	ACTGAGGAGG	CACACACCCC	AGGTAGATGG	CCCCAAAATG	1600
438	ATCCAGTACC	ACCCCTGCTG	CCAGCCCTGG	ACCACCCGGC	CAGGACAGAT	1650
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442	ACCCCTGGGAG	GGAACTGAGG	GTTCCCCACC	CACACCTGTC	TCCTCATCTC	1850
443	CACCGGCACC	CCACTCAGAT	TCCCATACCT	ACCCCTTACC	CCCAACCTCA	1900
444	TCTTGTCAGA	ATCCCTGCTG	TCAACCCACG	GAAGCCACGG	GAATGGCGGC	1950
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451	GAGAGGTCCA	GGGCACGGTG	GCCACATATG	GCCCATATTT	CCTGCATCTT	2300
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476	GGTGTGCCAG	CAGTGAATGT	TTGCCCTGAA	TGCACACCAA	GGGCCCCACC	3600
477	TGCCACAGGA	CACATAGGAC	TCCACAGAGT	CTGGCCTCAC	CTCCCTACTG	3650

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523 ATTGTAATGA TCTTGGGTGG ATCC 5724
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528 (2) INFORMATION FOR SEQUENCE ID NO: 9:

529 (i) SEQUENCE CHARACTERISTICS:

530 (A) LENGTH: 4157 base pairs

## Patent Application US/07/807,043

531 (B) TYPE: nucleic acid  
532 (D) TOPOLOGY: linear  
533 (ii) MOLECULE TYPE: genomic DNA  
534 (ix) FEATURE:  
535 (A) NAME/KEY: MAGE-2 gene  
536 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

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542 GGTCAGAGGA CAGCGAGATT CTCGCCCTGA GCAACGGCCT GACGTCGGCG 150  
543 GAGGGAAGCA GGCGCAGGCT CCGTGAGGAG GCAAGGTAAG ACGCCGAGGG 200  
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546 GCTCAGTCGC CACCACCTCA CCCC GCCACC CCCC GCCGCT TTAACCGCAG 350  
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626	TCACTGGCTC ATTTCTTTTAC CATTCACTCA GCATCTGCTC TGTGGAAGGC	4142
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634	(i) SEQUENCE CHARACTERISTICS:	
635	(A) LENGTH: 662 base pairs	
636	(B) TYPE: nucleic acid	

## Patent Application US/07/807,043

637 (D) TOPOLOGY: linear  
638 (ii) MOLECULE TYPE: genomic DNA  
639 (ix) FEATURE:  
640 (A) NAME/KEY: MAGE-21 gene  
641 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:  
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654 GAGGGTAACC CCCCCGACC CCCACCACCA TTCCCATCCC CCAACACCAA 500  
655 CCCCACCCC ATCCCCAAC ACCAAACCCA CCACCATCGC TCAAACATCA 550  
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657 GAGCTTTGCC CCTGCAATCA ACCCACGGAA GCTCCGGGAA TGGCGGCCAA 650  
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668 (2) INFORMATION FOR SEQUENCE ID NO: 11:  
669 (i) SEQUENCE CHARACTERISTICS:  
670 (A) LENGTH: 1640 base pairs  
671 (B) TYPE: nucleic acid  
672 (D) TOPOLOGY: linear  
673 (ii) MOLECULE TYPE: cDNA to mRNA  
674 (ix) FEATURE:  
675 (A) NAME/KEY: cDNA MAGE-3  
676 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
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687 TCT ACT CTA GTT GAA GTC ACC CTG GGG GAG GTG CCT GCT GCC 339  
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## Patent Application US/07/807,043

690 GAG GAC TCC AGC AAC CAA GAA GAG GAG GGG CCA AGC ACC TTC 465  
691 CCT GAC CTG GAG TCC GAG TTC CAA GCA GCA CTC AGT AGG AAG 507  
692 GTG GCC GAG TTG GTT CAT TTT CTG CTC CTC AAG TAT CGA GCC 549  
693 AGG GAG CCG GTC ACA AAG GCA GAA ATG CTG GGG AGT GTC GTC 591  
694 GGA AAT TGG CAG TAT TTC TTT CCT GTG ATC TTC AGC AAA GCT 633  
695 TCC AGT TCC TTG CAG CTG GTC TTT GGC ATC GAG CTG ATG GAA 675  
696 GTG GAC CCC ATC GGC CAC TTG TAC ATC TTT GCC ACC TGC CTG 717  
697 GGC CTC TCC TAC GAT GGC CTG CTG GGT GAC AAT CAG ATC ATG 759  
698 CCC AAG GCA GGC CTC CTG ATA ATC GTC CTG GCC ATA ATC GCA 801  
699 AGA GAG GGC GAC TGT GCC CCT GAG GAG AAA ATC TGG GAG GAG 843  
700 CTG AGT GTG TTA GAG GTG TTT GAG GGG AGG GAA GAC AGT ATG 885  
701 TTG GGG GAT CCC AAG AAG CTG CTC ACC CAA CAT TTC GTG CAG 927  
702 GAA AAC TAC CTG GAG TAC CGG CAG GTC CCC GGC AGT GAT CCT 969  
703 GCA TGT TAT GAA TTC CTG TGG GGT CCA AGG GCC CTC GTT GAA 1011  
704 ACC AGC TAT GTG AAA GTC CTG CAC CAT ATG GTA AAG ATC AGT 1053  
705 GGA GGA CCT CAC ATT TCC TAC CCA CCC CTG CAT GAG TGG GTT 1095  
706 TTG AGA GAG GGG GAA GAG TGA 1116  
707 GTCTGAGCAC GAGTTGCAGC CAGGGCCAGT GGGAGGGGGT CTGGGCCAGT 1166  
708 GCACCTTCCG GGGCCGCATC CCTTAGTTTC CACTGCCCTCC TGTGACGTGA 1216  
709 GGCCCATTTCT TCACTCTTTG AAGCGAGCAG TCAGCATTCT TAGTAGTGGG 1266  
710 TTTCTGTTCT GTTGGATGAC TTGAGATTA TTCTTTGTTT CCTGTTGGAG 1316  
711 TTGTTCAAAT GTTCCTTTTA ACGGATGGTT GAATGAGCGT CAGCATCCAG 1366  
712 GTTTATGAAT GACAGTAGTC ACACATAGTG CTGTTTATAT AGTTTAGGAG 1416  
713 TAAGAGTCTT GttTTTTACT CAAATTgGGA AATCCATTCC ATTTTGTGAA 1466  
714 TTGTGACATA ATAATAGCAG TGGTAAAAGT ATTTGCTTAA AATTGTGAGC 1516  
715 GAATTAGCAA TAACATACAT GAGATAACTC AAGAAATCAA AAGATAGTTG 1566  
716 ATTCTTGCCCT TGTACCTCAA TCTATTCTGT AAAATTAAAC AAATATGCAA 1616  
717 ACCAGGATTT CCTTGACTTC TTG 1640

718

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721

## (2) INFORMATION FOR SEQUENCE ID NO: 12:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 943 base pairs

(B) TYPE: nucleic acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: genomic DNA

## (ix) FEATURE:

(A) NAME/KEY: MAGE-31 gene

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

731

732

733

734 GGATCCTCCA CCCAGTAGA GTGGGGACCT CACAGAGTCT GGCCAACCCT 50  
735 CCTGACAGTT CTGGGAATCC GTGGCTGCGT TTGCTGTCTG CACATTGGGG 100  
736 GCCCGTGGAT TCCTCTCCA GGAATCAGGA GCTCCAGGAA CAAGGCAGTG 150  
737 AGGACTTGGT CTGAGGCAGT GTCCTCAGGT CACAGAGTAG AGGGGgCTCA 200  
738 GATAGTGCCA ACGGTGAAGG TTTGCCTTGG ATTCAAACCA AGGGCCCCAC 250  
739 CTGCCCCAGA ACACATGGAG TCCAGAGCGC CTGGCCTCAC CCTCAATACT 300  
740 TTCAGTCCTG CAGCCTCAGC ATGCGCTGGC CGGATGTACC CTGAGGTGCC 350  
741 CTCTCACTTC CTCCTTCAGG TTCTGAGGGG ACAGGCTGAC CTGGAGGACC 400  
742 AGAGGCCCCC GGAGGAGCAC TGAAGGAGAA GATCTGTAAG TAAGCCTTTG 450

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743 TTAGAGCCTC CAAGGTTCCA TTCAGTACTC AGCTGAGGTC TCTCACATGC 500  
744 TCCCTCTCTC CCCAGGCCAG TGGGTCTCCA TTGCCAGCT CCTGCCACA 550  
745 CTCCCGCCTG TTGCCCTGAC CAGAGTCATC 580  
746 ATG CCT CTT GAG CAG AGG AGT CAG CAC TGC AAG CCT GAA GAA 622  
747 GGC CTT GAG GCC CGA GGA GAg GCC CTG GGC CTG GTG GGT GCG 664  
748 CAG GCT CCT GCT ACT GAG GAG CAG GAG GCT GCC TCC TCC TCT 706  
749 TCT AGT GTA GTT GAA GTC ACC CTG GGG GAG GTG CCT GCT GCC 748  
750 GAG TCA CCA GAT CCT CCC CAG AGT CCT CAG GGA GCC TCC AGC 790  
751 CTC CCC ACT ACC ATG AAC TAC CCT CTC TGG AGC CAA TCC TAT 832  
752 GAG GAC TCC AGC AAC CAA GAA GAG GAG GGG CCA AGC ACC TTC 874  
753 CCT GAC CTG GAG TCT GAG TTC CAA GCA GCA CTC AGT AGG AAG 916  
754 GTG GCC AAG TTG GTT CAT TTT CTG CTC 943  
755  
756  
757  
758  
759 (2) INFORMATION FOR SEQUENCE ID NO: 13:  
760 (i) SEQUENCE CHARACTERISTICS:  
761 (A) LENGTH: 1067 base pairs  
762 (B) TYPE: nucleic acid  
763 (D) TOPOLOGY: linear  
764 (ii) MOLECULE TYPE: cDNA to mRNA  
765 (ix) FEATURE:  
766 (A) NAME/KEY: cDNA MAGE-4  
767 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
768  
769  
770  
771 GGG CCA AGC ACC TCG CCT GAC GCA GAG TCC TTG TTC CGA 39  
772 GAA GCA CTC AGT AAC AAG GTG GAT GAG TTG GCT CAT TTT CTG 81  
773 CTC CGC AAG TAT CGA GCC AAG GAG CTG GTC ACA AAG GCA GAA 123  
774 ATG CTG GAG AGA GTC ATC AAA AAT TAC AAG CGC TGC TTT CCT 165  
775 GTG ATC TTC GGC AAA GCC TCC GAG TCC CTG AAG ATG ATC TTT 207  
776 GGC ATT GAC GTG AAG GAA GTG GAC CCC GCC AGC AAC ACC TAC 249  
777 ACC CTT GTC ACC TGC CTG GGC CTT TCC TAT GAT GGC CTG CTG 291  
778 GGT AAT AAT CAG ATC TTT CCC AAG ACA GGC CTT CTG ATA ATC 333  
779 GTC CTG GGC ACA ATT GCA ATG GAG GGC GAC AGC GCC TCT GAG 375  
780 GAG GAA ATC TGG GAG GAG CTG GGT GTG ATG GGG GTG TAT GAT 417  
781 GGG AGG GAG CAC ACT GTC TAT GGG GAG CCC AGG AAA CTG CTC 459  
782 ACC CAA GAT TGG GTG CAG GAA AAC TAC CTG GAG TAC CGG CAG 501  
783 GTA CCC GGC AGT AAT CCT GCG CGC TAT GAG TTC CTG TGG GGT 543  
784 CCA AGG GCT CTG GCT GAA ACC AGC TAT GTG AAA GTC CTG GAG 585  
785 CAT GTG GTC AGG GTC AAT GCA AGA GTT CGC ATT GCC TAC CCA 627  
786 TCC CTG CGT GAA GCA GCT TTG TTA GAG GAG GAA GAG GGA GTC 669  
787 TGAGCATGAG TTGCAGCCAG GGCTGTGGGG AAGGGGCAGG GCTGGGCCAG 719  
788 TGCATCTAAC AGCCCTGTGC AGCAGCTTCC CTTGCCTCGT GTAACATGAG 769  
789 GCCATTCTT CACTCTGTTT GAAGAAAATA GTCAGTGTTC TTAGTAGTGG 819  
790 GTTTCTATTT TGTGATGA CTTGGAGATT TATCTCTGTT TCCTTTTACA 869  
791 ATGTTGAAA TGTTCCTTTT AATGGATGGT TGAATTAAT TCAGCATCCA 919  
792 AGTTTATGAA TCGTAGTTAA CGTATATTGC TGTAAATATA GTTTAGGAGT 969  
793 AAGAGTCTTG TTTTATTC AGATTGGGAA ATCCGTTCTA TTTTGTGAAT 1019  
794 TTGGGACATA ATAACAGCAG TGGAGTAAGT ATTTAGAAGT GTGAATTC 1067  
795

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796  
797 (2) INFORMATION FOR SEQUENCE ID NO: 14:  
798 (i) SEQUENCE CHARACTERISTICS:  
799 (A) LENGTH: 226 base pairs  
800 (B) TYPE: nucleic acid  
801 (D) TOPOLOGY: linear  
802 (ii) MOLECULE TYPE: genomic DNA  
803 (ix) FEATURE:  
804 (A) NAME/KEY: MAGE-5 gene  
805 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:  
806  
807  
808  
809 AGGATCCCCA GGAGGCCCTA GAGGAGCACC AAAGGAGAAG ATCTGTAAGT 50  
810 AAGCCTTTGT TAGAGCCTCC AAGGTTCAAGT TTTTAGCTGA GGCTTCTCAC 100  
811 ATGCTCCCTC TCTCTCCAGG CCAAGTGGGTC TCCATTGCCC AGCTCCTGCC 150  
812 CACACTCCTG CCTGTTGCGG TGACCAGAGT CGTC 184  
813 ATG TCT CTT GAG CAG AAG AGT CAG CAC TGC AAG CCT GAG GAA 226  
814  
815 (2) INFORMATION FOR SEQUENCE ID NO: 15:  
816 (i) SEQUENCE CHARACTERISTICS:  
817 (A) LENGTH: 225 base pairs  
818 (B) TYPE: nucleic acid  
819 (D) TOPOLOGY: linear  
820 (ii) MOLECULE TYPE: cDNA  
821 (ix) FEATURE:  
822 (A) NAME/KEY: MAGE-6 gene  
823 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
824  
825  
826  
827 TAT TTC TTT CCT GTG ATC TTC AGC AAA GCT TCC GAT TCC TTG 42  
828 CAG CTG GTC TTT GGC ATC GAG CTG ATG GAA GTG GAC CCC ATC 84  
829 GGC CAC GTG TAC ATC TTT GCC ACC TGC CTG GGC CTC TCC TAC 126  
830 GAT GGC CTG CTG GGT GAC AAT CAG ATC ATG CCC AGG ACA GGC 168  
831 TTC CTG ATA ATC ATC CTG GCC ATA ATC GCA AGA GAG GGC GAC 210  
832 TGT GCC CCT GAG GAG 225  
833  
834  
835  
836  
837  
838 (2) INFORMATION FOR SEQUENCE ID NO: 16:  
839 (i) SEQUENCE CHARACTERISTICS:  
840 (A) LENGTH: 166 base pairs  
841 (B) TYPE: nucleic acid  
842 (D) TOPOLOGY: linear  
843 (ii) MOLECULE TYPE: genomic DNA  
844 (ix) FEATURE:  
845 (A) NAME/KEY: MAGE-7 gene  
846 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:  
847  
848



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849  
850 ACA AGC ACT AGT TTC CTT GTG ATC TAT GGC AAA GCC TCA GAG 42  
851 TGC ATG CAG GTG ATG TTT GGC ATT GAC ATG AAG GAA GTG GAC 84  
852 CCC GCG GCC ACT CCT ACG TCT TGT ACC TGC TTG GGC CTC TCC 126  
853 TAC AAT GGC CTG CTG GGT GAT GAT CAG AGC ATG CCC GAG A 166  
854



PAGE: 1

SEQUENCE MISSING ITEM REPORT  
PATENT APPLICATION US/07/807,043

DATE: 07/18/92  
TIME: 11:55:30

MANDATORY IDENTIFIER THAT WAS NOT FOUND

COUNTRY  
STRANDEDNESS

## LINE ORIGINAL TEXT

## CORRECTED TEXT

3 (i) APPLICANTS: Boon, Thierry, Van den  
50 (2) INFORMATION FOR SEQUENCE ID NO: 1:  
71 (2) INFORMATION FOR SEQUENCE ID NO: 2:  
138 (2) INFORMATION FOR SEQUENCE ID NO: 3:  
156 (2) INFORMATION FOR SEQUENCE ID NO: 4:  
202 (2) INFORMATION FOR SEQUENCE ID NO: 5:  
313 (2) INFORMATION FOR SEQUENCE ID NO: 6:  
333 (2) INFORMATION FOR SEQUENCE ID NO: 7:  
394 (2) INFORMATION FOR SEQUENCE ID NO: 8:  
528 (2) INFORMATION FOR SEQUENCE ID NO: 9:  
633 (2) INFORMATION FOR SEQUENCE ID NO: 10:  
668 (2) INFORMATION FOR SEQUENCE ID NO: 11:  
722 (2) INFORMATION FOR SEQUENCE ID NO: 12:  
759 (2) INFORMATION FOR SEQUENCE ID NO: 13:  
797 (2) INFORMATION FOR SEQUENCE ID NO: 14:  
815 (2) INFORMATION FOR SEQUENCE ID NO: 15:  
838 (2) INFORMATION FOR SEQUENCE ID NO: 16:

(i) APPLICANT: Boon, Thierry, Van den E  
(2) INFORMATION FOR SEQ ID NO: 1:  
(2) INFORMATION FOR SEQ ID NO: 2:  
(2) INFORMATION FOR SEQ ID NO: 3:  
(2) INFORMATION FOR SEQ ID NO: 4:  
(2) INFORMATION FOR SEQ ID NO: 5:  
(2) INFORMATION FOR SEQ ID NO: 6:  
(2) INFORMATION FOR SEQ ID NO: 7:  
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(2) INFORMATION FOR SEQ ID NO: 12:  
(2) INFORMATION FOR SEQ ID NO: 13:  
(2) INFORMATION FOR SEQ ID NO: 14:  
(2) INFORMATION FOR SEQ ID NO: 15:  
(2) INFORMATION FOR SEQ ID NO: 16: